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A PUBLIC SAFETY SERVICES

MARCH 1992
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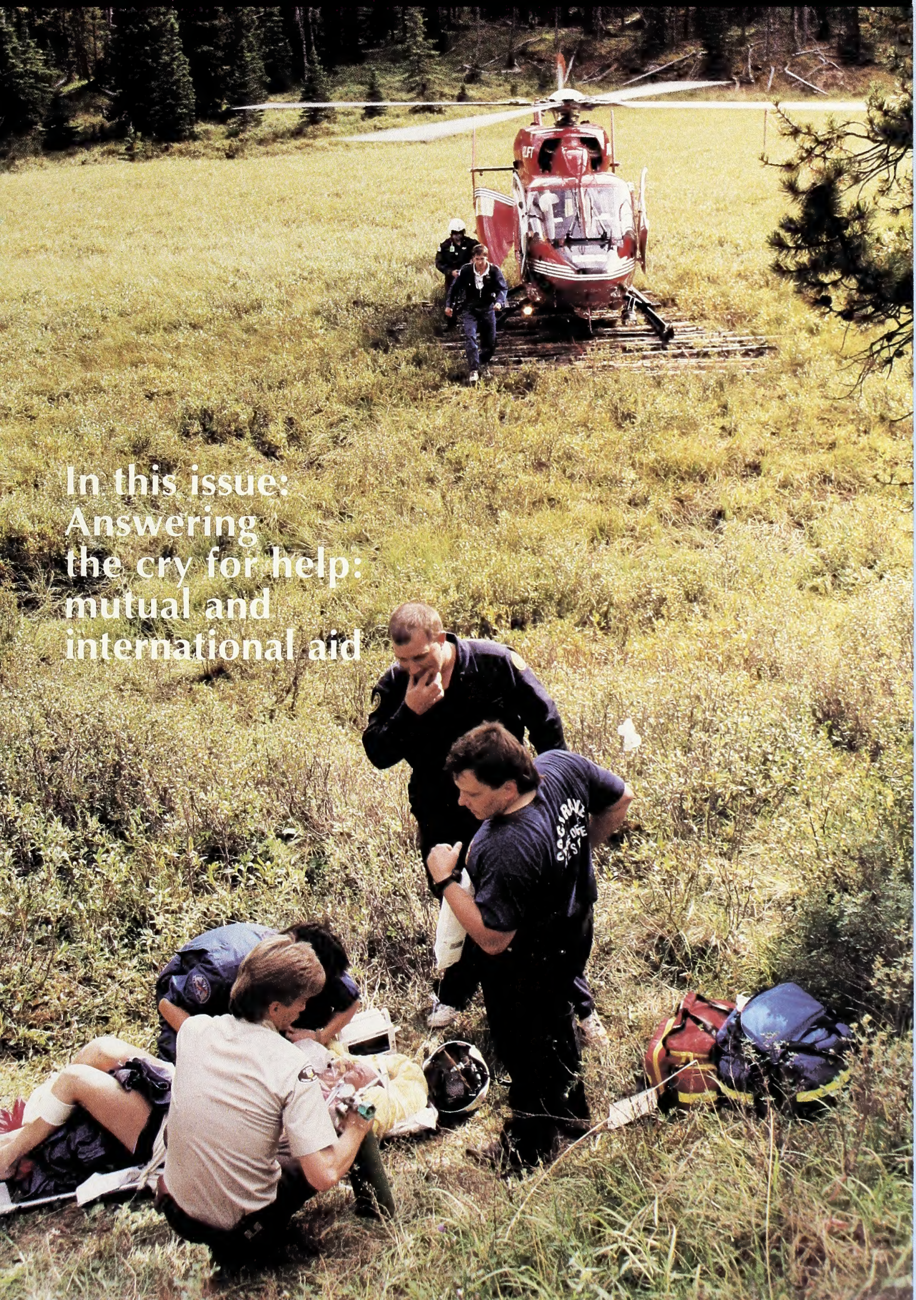
AGENCY INSIGHT



In this issue:
Answering the cry for help: mutual and international aid

Generosity and cooperation

One of the unique aspects about the emergency preparedness field is the extent of the cooperation displayed by the agencies and individual specialists involved. The articles in this edition of *Insight* demonstrate that when it comes to safety issues, an excellent working relationship exists not only amongst orders of government, but between government and industry, and between municipal jurisdictions.

In few other fields is there so much goodwill between counterpart agencies and authorities, as people put aside their differences in order to save lives. Innovations and discoveries in the safety field are revealed without hesitation or delay across provincial lines, and even around the globe. As Jim Hoffman of Emergency Preparedness Canada notes in the article on earthquake preparedness (page 8), the cooperative attitude between colleagues in the emergency preparedness community is one of the "warm fuzzies" of this business. Our Viewpoint contributor, however, notes one area in which goodwill is particularly lacking. See page 14 and let us know if you agree with the writer's point of view.

This issue of *Insight* contains stories from England (page 4), Australia (page 5) and Ottawa (page 6) that show the diligence with which countries work to help each other out in times of disaster, whether the trouble be short-term or chronic.

Starting on page 7, *Insight* provides some background on MIACC, the Major Industrial Accidents Council of Canada, which is helping to mitigate the risk of industrial accidents by pulling industry and government together to work as a team.

Delving deep into Alberta's mutual aid scenario this month, *Insight* provides you with a host of articles which show how Albertans work together when it really counts.

Reports are provided by the County of Parkland (page 10), the province's Fire Commissioner (page 11), and a member of Alberta's dashing aeromedical transport team (page 17). Key eyewitnesses provide detailed accounts of the teamwork shown in the recent Haynes blowout (page 14) and at the site of last year's tanker-train collision at Kinsella (page 15).

Judith Hughes, the APSS Director of Training, provides on page 10 an explanation of how mutual aid makes its way into the emergency preparedness classroom.

This edition contains essential information for those who want to expand their knowledge of the emergency preparedness field. Dates are provided for courses at APSS and NAIT, along with notices about a unique fire protection symposium in Jasper as well as a major emergency response exposition in Fort Saskatchewan.

Insight is published quarterly by Alberta Public Safety Services (APSS). The publication aims to inform readers about current developments concerning topics which relate to the mandate of APSS: to prepare for, respond to and follow up on man-made or natural disasters in Alberta. This mandate includes activities in the areas of disaster services and management, as well as the handling, offering and transporting of dangerous goods.

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On the cover: A STARS helicopter comes to the rescue of an accident victim stranded in a heavily forested area outside of Canmore, Alberta. Dense bush prevented ambulances from reaching the scene.

PHOTO: LARRY MAC DOUGAL, CALGARY HERALD

Alberta
PUBLIC SAFETY SERVICES

The Honourable Gerry Ducharme, Manitoba's Minister of Government Services and Responsible for Emergency Measures, visited APSS in January. Here, Judith Hughes, APSS Director of Training, explains the set-up of a disaster exercise to the Minister (third from right) and his staff. Looking on are APSS Managing Director Mark Egener (far right) and Training Officer Stu Black (second from right).

CANADIANA

MAR 24 1992

Mutual aid is essential to Alberta

In early January 1992, the Honourable Ray Speaker, Minister, Alberta Public Safety Services, resigned his seat in the provincial legislature. The Honourable Rick Orman, Minister of Energy, was appointed to replace him in a temporary capacity. *Insight* spoke with the acting minister about his thoughts on mutual aid in Alberta.

Mutual aid is the theme for this issue of *Insight*. Can you explain why mutual aid is considered a vital part of emergency procedures in Alberta?

In every culture in the world, there is a fundamental need to help one's neighbours when they are in trouble. This help cannot be ordered or legislated. It is something that is basic in human nature.

Mutual aid, as the term is used in emergency preparedness, is merely an extension of this central human response to an emergency. I believe that any emergency plan that does not include a provision for mutual aid is lacking an important component.

How can the province encourage the use of mutual aid in times of trouble?

Since every municipality in Alberta must have an emergency plan, each of these plans should include a section on mutual aid. In practice, this means that if the resources in a municipality are not sufficient to respond to the emergency, the municipality, by prior arrangement, can call upon its neighbours to provide additional help. This help would include additional firefighters, police and ambulance services as well as search and rescue teams. Of course, this means that the neighbouring municipalities that provide help will expect help in return from all their neighbours when they are faced with a disaster.

Does the province participate in the development of mutual aid arrangements?

Yes indeed. We actively promote mutual aid agreements among neighbouring municipalities. We go farther than just mutual aid agreements by helping to procure regionally used emergency response equipment. In cooperation with the federal and municipal governments, we provide cash assistance to buy equipment that will increase emergency preparedness. This program is called the Regional Response Improvement Program (RRIP), and it works with the federal Joint Emergency Preparedness Program (JEPP).

How exactly has the RRIP program contributed to emergency preparedness in Alberta?

Every municipality can apply for grants under the program, and although it is not possible to meet every request, each one is carefully assessed. Detailed discussions are held with the municipalities concerned to determine whether the proposed purchase will be of benefit in mutual aid operations between neighbouring municipalities.

One example of the type of equipment often requested is a communications vehicle, which allows first responders to communicate directly with the local Emergency Operations Centre without running into problems with exclusive radio networks that are not compatible with the other emergency services. This type of vehicle can cost as much as $150,000.

What is the annual cost of RRIP?

Since the introduction of the program, the three orders of government in Alberta have provided funds for 53 projects at a total cost of $2,724,000. Every dollar spent provides additional safety for Albertans. I expect that even in these times of fiscal restraint, the 1992 expenditures will be over one million dollars.

As *Insight* went to press, the Honourable Peter Trynchy was appointed by the Premier as Minister, Alberta Public Safety Services. A full report will appear in our next edition.

Houses of Parliament, London. The British government aims to provide the right assistance to the right place at the right time.

For disaster relief, the world can count on Britain

by Peter Burton
Head of Disaster Unit,
Emergency Aid Department,
Overseas Development
Administration
London, England

Providing disaster relief overseas is a high priority and high profile activity for the British Government.

The Disaster Unit of Britain's Overseas Development Administration (ODA) handles the British Government's immediate relief aid for all natural disasters overseas, and for man-made disasters in developing countries (man-made disasters in developed countries are handled by the Foreign Office).

The Disaster Unit is essentially a funding agency which works closely with the United Nations, especially the Office of the United Nations Disaster Relief Coordinator (UNDRO) in Geneva, which acts as an information clearing house on disasters as they occur. The Unit also works with the International Red Cross movement through the British Red Cross, with the European Commission in Brussels, and with voluntary sector agencies such as OXFAM and Save the Children.

The extent and direction of Britain's aid is governed primarily by humanitarian and logistical considerations. It may also be affected by political ones, although lack of diplomatic relations is not a ban to sending humanitarian aid.

It is obvious that the Disaster Unit must work closely with other donors to avoid duplication and to offer the best help possible to the victims. This is done through UNDRO and also in the affected country. Britain's ODA has worked alongside the Canadian International Development Agency (CIDA) on many past occasions such as the earthquakes in Mexico City and Armenia.

Once we are alerted to any disaster where assistance may be requested, the Disaster Unit urgently gathers information on the nature and extent of the disaster, the people affected, the local capacity to cope, and priority requirements. The changing situation is closely monitored, as are technical or logistical problems which might delay or frustrate relief actions.

In the majority of cases, disaster relief is provided in the form of a financial grant, often channelled through a local or international organization or our embassy to purchase relief supplies on the spot. This minimizes delay and transport costs and supports the damaged economy.

Just in case they are needed, the Disaster Unit keeps on hand in Britain supplies of tents, blankets and some medicines, and can send specialist personnel on request as well as trained relief teams to meet specific needs.

In 1988, 1989 and 1990 the Disaster Unit responded to 90, 41 and 66 disasters respectively, and spent a total of approximately $31 million (Can). This does not include the cost of food aid and aid to long-term refugee situations, which are not within the Disaster Unit's mandate.

Clearly within our mandate is disaster preparedness and mitigation measures. To coincide with the United Nation's International Decade for Natural Disaster Reduction, we are funding practical projects to help developing countries prepare against future disasters. In 1990, over half a million pounds sterling were spent on such measures.

Further information can be obtained from the Disaster Unit in London, telephone (071) 917-0470 or 0273, fax (071) 917-0502.

Aid from down under

by Jane Munday,
Media Director,
Melbourne Police Department
and Robin Herron,
Assistant Director,
Operations and Plans,
Australian Natural Disasters
Organization.

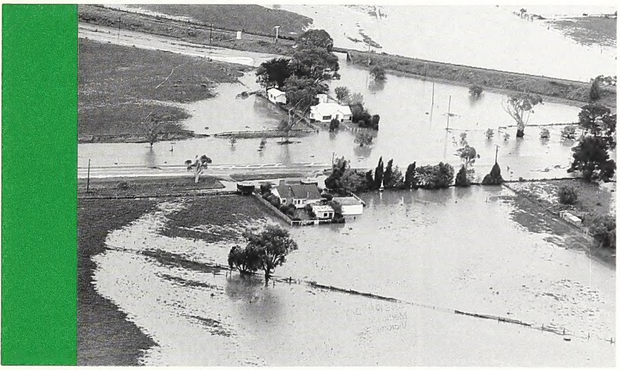
The emergency management system in Australia differs greatly from that in Canada.

In Australia, which is made up of six states and two territories, state governments are responsible for the protection of life and property, and there are no formal mutual aid agreements, although there are co-operative agreements between agencies, which tend to have state-wide responsibility, and states.

Municipalities in the State of Victoria are required to have their own disaster plans and to work with the local agencies, which are ultimately coordinated on a state basis. Public information for major emergencies is coordinated by the Victoria Police.

In the event of a major incident, a State Emergency Coordination Centre can coordinate the provision of resources from all agencies and from state and local governments.

Australia's Natural Disasters Organization coordinates federal assistance to states and territories in the event of natural or man-made disasters.


"THE AGE" NEWSPAPER, MELBOURNE, AUSTRALIA

April 1990: Flooding engulfs farms in Australia's Sale-Stratford area. The Natural Disasters Organization may be asked to coordinate the provision of assistance from other states in the wake of this type of disaster.

The operational arm of the Natural Disasters Organization is the National Emergency Operations Centre (NEOC), located in Australia's capital city, Canberra. The NEOC coordinates all federal physical and technical assistance to states or other countries affected by disaster.

However, in times of distress the first agency called on is usually the Australian Defence Force, which is most capable of providing the quickest response.

As the emergency response capabilities of the states increase, dependence on federal assistance through the Natural Disasters Organization has declined, but overseas assistance has increased. This trend will likely continue until the nations that most require aid are able to establish their own disaster management infrastructures.

Australian disaster authorities maintain close, if informal, contact with overseas agencies in the U.S., France, the United Nations and the European Community, and especially with their counterparts in New Zealand's Department of Civil Defence. Australia has an understanding with New Zealand to provide assistance in the likely event of an earthquake in New Zealand.

Cross-border crew to the rescue

Across the B.C. border is rural Boundary County, Idaho, home of the Hall Mountain Volunteer Fire Association, a pint-sized membership-based organization that represents the true spirit of mutual aid.

Just ask the people in Kingsgate, B.C., a border hamlet with a fire hydrant but no fire department and no fire protection.

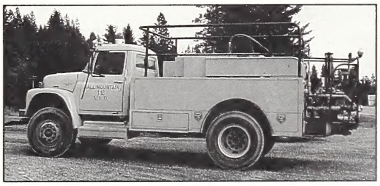
Until Hall Mountain stepped in with a plan.

"We're all family around here, friends and neighbours, and we didn't want to sit around while somebody's house burned," explains Brad Lowther, the Assistant Chief of the Hall Mountain Fire Association. "So we're always ready to help out the folks in Kingsgate if ever they need us."

The Canada Customs officials in Kingsgate are delighted with the arrangement. Hall Mountain fire trucks on their way to an emergency will have carte blanche entry into Canada, 24 hours a day through the Kingsgate border crossing.

Hall Mountain expects to meet with the B.C. Fire Commissioner to arrange a formal agreement, perhaps one which would allow the department to increase its annual operating revenue by signing up memberships in Canada.

The Hall Mountain crew torched this house slated for demolition in order to get a little extra practice.



Hall Mountain's wildlands truck; indispensable in the department's largely rural district.

A Canadian how-to-help guide

***Editor's note:** The following article is adapted from a document prepared by the Canadian International Development Agency, (CIDA), Canada's overseas aid specialists. CIDA is proud of and encourages Canadian generosity of spirit in helping other nations that have been beset by tragedy, but warns that like anything else, the act of helping must be done right if it is to be of any help at all.*

1. Wanted: expertise, not extra bodies

Disasters causing massive destruction, loss of life, and impoverishment ignite compassion in the hearts of Canadians. In the spirit of human solidarity, people want to help. Instinctively people think of sending food, clothing, blankets or of volunteering at the disaster site. The Canadian International Development Agency (CIDA) discourages both.

CIDA's International Humanitarian Assistance (IHA) program coordinates Canada's response to natural and man-made disasters in developing countries.

After a disaster strikes, international organizations such as the United Nations Disaster Relief Organization (UNDRO) and the Red Cross work with local authorities to assess the damage and the needs of the affected population. Once the assessment has been done, international and/or Canadian non-governmental organizations appeal to donor countries for money to provide emergency relief, such as shelter, clean drinking water and medical supplies, until victims recover and the damage can be repaired.

It is far more effective for members of the public to contribute to a Canadian non-governmental or an internationally recognized relief organization such as the Red Cross than to try to lend a hand on their own. This is because:

- well intentioned donors may send inappropriate goods, such as unsuitable clothing to a tropical country or perishable food stuffs to an area where the required storage facilities do not exist.
- shipping goods to the disaster site is expensive. Money saved in shipping costs can be spent on goods obtained more quickly and at less cost through local purchase. This stimulates the local economy.
- unsolicited goods and services may duplicate the relief operations already underway by many countries and local authorities
- Canadian volunteers may be inexperienced in disaster relief, may not speak the language or be familiar with the culture in the disaster-stricken country. This will heighten confusion. Also, every volunteer is another body to feed and shelter.

Instinctively people think of sending food, clothing, blankets or of volunteering at the disaster site. CIDA discourages both.

Canadians who wish to assist those in need overseas are encouraged to donate their time to a voluntary organization participating in the relief effort, right here in Canada.

2. Long-term relief for long-term crises

Many of the disasters that occur in the developing world have a long-lasting impact. Civil strife and famine drive people from their homes in search of refuge and food. Some people are displaced within their own countries, others are refugees in neighbouring states.

CIDA-IHA supports long-term assistance programs by making contributions to the regular programming of agencies such as the United Nations High Commissioner for Refugees. For example, this agency operates a refugee camp in Malawi for refugees from Mozambique who have fled civil war. The refugees are encouraged to be self reliant. They do their own farming and cook their own food. They have built a school, medical centre and community centre, and have regained stability while they wait to return to their homes.

Reducing disasters altogether

The United Nations has declared the 1990s the decade for reduction of natural and human-made disasters. Canada has lead the way among international donors in setting down a policy for funding programs and projects aimed at reducing or eliminating disasters and the loss of life, health and property caused by them.

Canada has helped many countries prone to earthquakes, floods, famine, drought and epidemics take suitable precautions. To prepare themselves to better absorb the impact of potential disasters, communities can develop response plans, such as a network of distribution centres for food, clean drinking water and materials for makeshift shelters.

CIDA's IHA program is encouraging international and Canadian humanitarian organizations to undertake disaster preparedness and prevention projects.

Aid partners

When helping one another to provide disaster relief anywhere in the world, Canada works as a team with other countries and with agencies that provide specialized expertise. CIDA-IHA supports disaster relief efforts in developing countries in close cooperation with 40 Canadian-based non-governmental organizations, including Care Canada, the Canadian Council for International Cooperation, the Council of Canadian Churches and World Vision Canada.

MIACC Update
The Major Industrial Accidents Council of Canada

MIACC continues to exert an increasingly strong influence on reducing the risk of occurrence of a devastating accident involving hazardous substances at industrial sites in Canada. As the organization's work impacts a vast array of health, safety and environmental issues that are certain to be of interest to *Insight* readers, MIACC's progress and achievements will be tracked in future editions.

Formerly known as the Major Industrial Accidents Co-ordinating Committee, MIACC changed its name to more accurately reflect its character and to symbolize the role that it will play in the future in prevention, preparedness and response to such accidents in Canada.

From its inception, MIACC has represented a uniquely Canadian approach to mitigating the risk of industrial accidents. The organization draws upon a multi-disciplinary team of experts to respond to the industrial emergency challenges that face the country. MIACC brings together representatives from all three orders of government, major corporations, trade associations, emergency response authorities, standards organizations, researchers and scholars.

MIACC brings this exceptional variety of people together on a voluntary basis to produce products that increase national and regional industrial emergency preparedness and public safety.

There are currently nine working groups within MIACC, one of which has produced an emergency planning guideline for industry which has been adopted and published as a National Standard of Canada. Over 1000 copies of this Standard have been sold to industry, and an accompanying software program has also been developed.

A new working group has been established to ensure that emergency plans for industry are compatible with those of municipalities. Another of the working groups has produced recommendations on buffer zones, for use by industry and high-risk municipalities.

Further areas are risk assessment, the life-cycle management of chemicals and chemical process safety, and the development of a computer system to coordinate a wide range of chemical information databases.

This year, MIACC will hold a series of workshops, including:

- Certification and accreditation of training programs and facilities for emergency responders, to be held in Ottawa on April 10, 1992
- Life cycle management of chlorine, scheduled for Edmonton on June 15-16, 1992
- Risk assessment, slated for autumn in Montreal.
- Another workshop in the safety area will be held by the Institute of Risk Research and the University of Alberta. This workshop will take place in November at the University.

In Canada and internationally, MIACC has become known for the exchange of technical information, and valuable lessons learned, through conferences such as the international ER series, held most recently in Halifax (1989) and Calgary (1991).

In September 1993, MIACC will present ***"The Practical Approach to Hazardous Substances Accidents"*** conferences in St. John, New Brunswick. This will be a "three-in-one" conference that surrounds ER '93, held in conjunction with the annual conference of the Air & Waste Management Association and Environment Canada's Technical Seminar on Chemical Spills.

Insight readers who would like to obtain more information about MIACC and any of its activities can call MIACC directly at its Ottawa office, telephone (613) 232-4435, or fax (613) 232-4915.

Vancouver will be hard hit if The Big One (a Richter 8+ earthquake) does ever occur off the west coast of North America.

Shake, rattle and roll

The big one is coming. According to federal government seismologists, a Richter 8+ earthquake with its epicentre off the west coast of North America is likely within the next two hundred years. It could even happen tonight.

The earthquake will, without a shadow of a doubt, shake up Vancouver, badly enough that the city might be shut down and cut off from the rest of Canada. This would not be a localized event. Victoria, the rest of Vancouver Island and the northwestern United States could be equally affected and unable to help.

Since 1983, the federal government has worked diligently to prepare a plan to help British Columbia dig itself out of the debris. As lead earthquake planner, Emergency Preparedness Canada, (EPC), has worked out a plan to mobilize resources from the remainder of the nation, especially from Alberta.

"No one order of government has the sole capacity to deal with major emergencies," says Jim Hoffman, Regional Director of EPC for Alberta and the Northwest Territories, explaining why the federal government is deeply involved in earthquake preparation. "In emergency planning, it's not important who is the leader and who is the follower. What is important is the cooperative aspect."

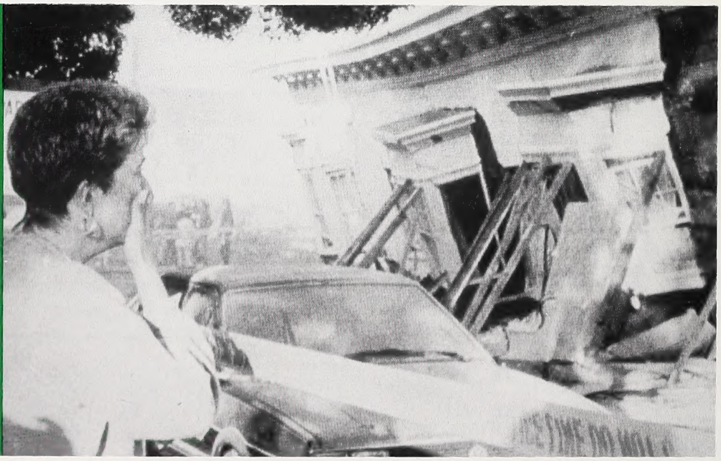
As B.C.'s immediate neighbour, Alberta has taken the initiative of creating a plan, in conjunction with EPC, which provides logistical details regarding every type of aid that Alberta could be asked to provide.

"The work done at the province to province level has been great," says David Gronbeck-Jones, Earthquake Planner for British Columbia's Provincial Emergency Program. "There have been no jurisdictional issues at all. For example, Alberta developed an earthquake support plan well before B.C. had a response plan. But that suits us just fine. We're dealing with saving lives here. We appreciate the work other levels of government have done on our behalf."

Jim Hoffman adds, "One of the warm fuzzies about this business is the cooperative attitude that our colleagues in the emergency preparedness community, in federal and provincial departments, have displayed. Our main problem is to get other people to buy into the planning. Emergency preparedness is insurance, and people don't often want to buy.

The process we're using at EPC is to look at emergency preparedness in terms of a concrete problem that can be resolved ahead of time with foresight and careful planning and most importantly, cooperation between all those who will be involved in receiving aid and those who will provide it."

In Alberta, there is a record of cooperation between all orders of government and the private sector in advancing preparedness for protection of the public and the environment. Alberta's support plan to assist B.C. in the event of a catastrophic earthquake is another example of this ongoing cooperation.



Who can forget the heartache caused by the San Francisco earthquake?

Recent acquisitions in the library:

A selected bibliography of materials available from the Alberta Public Safety Services Library

Compiled by Grace Waskiewicz
Library Technician

To borrow material listed, send an interlibrary loan request form to Alberta Public Safety Services Library (AEPS), 10320-146 Street, Edmonton, Alberta, Canada T5N 3A2. Materials located in the Coordination and Information Centre, at our Training School, the Government Emergency Operations Centre or our Reference Collection cannot be borrowed but can be referred to in the library.

Burby, Raymond J., Beverly Cigler, et. al. **Sharing Environmental Risks : How to Control Governments' Losses in Natural Disasters.** Boulder, Colo.: Westview Press, 1991. 280 p.

HC 110 .D45 B87 1991, MAIN

Character and magnitude of public losses in over 130 natural disasters. Perspectives from various disciplines - economics, planning, political science, public administration, and public finance are presented. Based on data from national surveys of local governments, case studies, and federal records of losses to public property.

Includes bibliographical references.

Carnino, Annick, Jean-Louis Nicolet, Jean-Claude Wanner. **Man and Risks : Technological and Human Risk Prevention.** New York: Marcel Dekker, 1991. 241 p.

T 55 .C35813 1990, MAIN

Includes bibliographical references and index.

Frank, James A., Jerrold B. Smith. **Rope Rescue Manual.** Santa Barbara, Calif.: California Mountain Company, 1987.

VM 533 .F72 1987, MAIN

Includes index.

Huxhold, William E. **An Introduction to Urban Geographic Information Systems.** New York: Oxford University Press, 1991. 337 p.

G 70.2. .H88 1991, MAIN

Includes bibliographical references.

Lees, Frank P. **Loss Prevention in the Process Industries : Hazard Identification, Assessment and Control.** Oxford, England: Butterworth-Heinemann, 1980. 2 volumes (1316 p.)

TP 690.6 .I43 v.1-2, MAIN

Comprehensive account of loss prevention. Covers the traditional areas of personal safety as well as the more technological aspects. Provides a balanced coverage of the whole field of safety and loss prevention in the process industries. Concerned essentially with the oil and chemical industries. Major reference work for both students and practitioners in the field of chemical engineering.

Includes bibliographical references and index.

McCracken, Michael C., editor. **Prospects for Future Climate : A Special U.S./U.S.S.R. Report on Climate and Climate Change.** Chelsea, Mich.: Lewis Publishers, 1990. 270 p.

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Includes bibliographical references.

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Includes bibliographical references and index.

Taylor, Verta., Alexander Ross, E.L. Quarantelli. **Delivery of Mental Health Services in Disasters : The Xenia Tornado and Some Implications.** Columbus, Ohio: Ohio State University, 1976. 328 p.

RA 790.6 T3, MAIN

Includes bibliography.

Tierney, Kathleen J., Barbara Baidsen. **Crisis Intervention Programs for Disaster Victims : A Source Book and Manual for Smaller Communities.** Newark, Del.: University of Delaware, 1991. 203 p.

HV 553. U6 T53, MAIN

Toigo, Jon William. **Disaster Recovery Planning : Managing Risk and Catastrophe in Information Systems.** Englewood Cliffs, N.J.: Prentice-Hall, 1989. 267 p.

HF 5548.2 .T616 1989, MAIN

Includes references and index.

MUTUAL AID IN

Illustrating mutual aid

by Ken Saulit,
Manager, Fire and Disaster Services,
County of Parkland

Mutual aid and cooperation with neighbouring municipalities are the cornerstones to the County of Parkland's highly successful emergency preparedness system.

The County of Parkland, population 21,000, is a residential, agricultural and industrial municipality adjacent to and stretching 100 kilometres west of the city of Edmonton.

The county is home to a large industrial park, power plants, gas plants and oilfield facilities. The Town of Stony Plain and the City of Spruce Grove, with a combined population of over 18,000, are located inside the county.

Rail traffic through the county represents an average of fortmy trains per day, with the equivalent of every tenth car carrying some type of dangerous good.

To manage the risks associated with such a wide range of industrial and transportation activity, the county of Parkland relies on an emergency response system based on a network of inter-municipal and inter-agency mutual aid agreements. The county currently has 25 response agreements with its 17 neighbouring municipalities.

Since no single municipality can prepare for every emergency, inter-municipal and inter-agency cooperation is a cost-effective way to ensure a high level of emergency preparedness. It's a system that has worked time and time again in the County of Parkland.

FIRE AGREEMENTS WITH ANOTHER MUNICIPALITY TO OPERATE COUNTY OF PARKLAND APPARATUS

- Devon
- Spruce Grove
- Stony Plain
- Wabamun
- Entwistle
- Seba Beach

FEE FOR SERVICE AGREEMENTS (ONE WAY)

- S.V. of Kapasiwin
- S.V. of Edmonton Beach
- S.V. of Silver Sands
- Wabamun Indian Reservation
- County of Leduc
- City of Edmonton

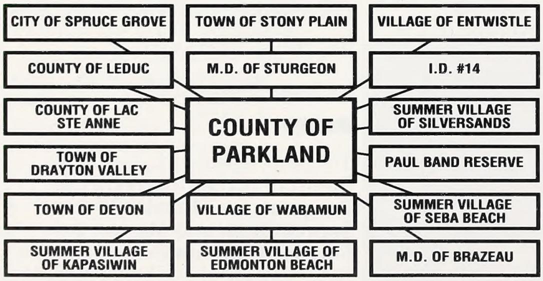
MUTUAL AID AGREEMENTS (RECIPROCAL)

FIRE

- County of Lac Ste Anne
- M.D. of Sturgeon
- M.D. of Brazeau
- I.D. of Yellowhead

DISASTER

- Stony Plain
- Spruce Grove
- Drayton Valley
- Entwistle
- Wabamun
- Seba Beach
- Edmonton Beach
- I.D. of Yellowhead
- M.D. of Brazeau



Teaching team spirit: mutual aid comes to the classroom

by Judith Hughes
Director of Training, APSS

Mutual aid is, from a philosophical standpoint, a fundamental underlying concept in emergency preparedness training and education. The notion of cooperation between communities influences the conceptual framework of course design and the dynamics of course delivery at the Alberta Public Safety Services Training School. Moreover, the course clusters and overall program purposely reflect the concept of mutual aid.

From a pragmatic point of view, the Municipal Government Act endorses mutual aid, and municipalities are encouraged to formalize mutual aid agreements with neighbouring communities. Increasingly, Indian bands and industrial sites are engaging in discussions with their neighbours with respect to mutual aid agreements. APSS has endorsed these initiatives through its participation in joint activities with Indian and Northern Affairs Canada and through its involvement with the Major Industrial Accidents Council of Canada (MIACC).

APSS courses are designed and revised in keeping with the assumption that the students, who represent a variety of professional and geographical constituencies will, in all likelihood, have to work in harmony with a variety of other groups should an emergency or disaster strike close to home.

Courses are designed so that students learn to work with each other, and are encouraged to practice solving problems together. Mock disaster exercises are carefully constructed to encourage students to find the most efficient and effective way of conducting an emergency operation through a division of labour that will maximize application of appropriate expertise.

The APSS approach to course design involves first identifying exactly what students should ideally learn and experience in each course. Though courses offered at the Training School cover a wide variety of material, the common denominator from an educational perspective is the intention that students who attend an APSS course take home a good knowledge of their role in relation to other roles. This is the essence of mutual aid.

Once a course has been designed in accordance with the principles and philosophy of cooperation, the dynamics of course delivery carry on the application of the shared problem solving approach. Hands-on, interactive activities ensure that students never lose perspective of their role within the overall context of an emergency, so that they are able to function effectively as members of a large team working towards a common goal.

One of the major courses delivered at the APSS Training School is the **Emergency Site Management** course, offered in conjunction with the **Emergency Public Information Officer** course. Emergency response personnel from all over Alberta attend these two courses. During the joint mock disaster exercises, a simulated emergency site and emergency operation centre form the stage for students to work together as they role-play as members of the fire, ambulance and police services, elected officials, public information officers and so on. Roving reporters add a realistic media dimension and added urgency to the exercise.

The rescue courses at the Training School are continually evolving to include new and emerging technologies that, by their nature, assume a cross-constituency sharing of resources and mutual aid. For example, helicopter rescue units are useful to communities with individuals trained to receive helicopters during rescue operations.

In keeping with the growing demand for this expertise, the Training School is adding a new session to its **Rescue Leaders** course, in which individuals will learn how to guide helicopters to land near emergency sites and safely load casualties on board.

Students in the Emergency Site Management course take turns role playing community emergency personnel at a simulated emergency. Here, the site manager (wearing vest) communicates with the Emergency Operations Centre.

The notion of resource sharing is becoming increasingly vital to forward-looking and future-oriented communities throughout Alberta. The philosophy of mutual aid is the thread that weaves through all course design and delivery activities at the APSS Training School.

Fire suppression in Alberta Your community plays a key role ...and so do you

by Tom Makey
Fire Commissioner,
Province of Alberta

Arrangements for supplemental fire suppression services fall into one of the following categories, as defined in "Fire Terms - A Guide to Their Meaning and Use," published by the National Fire Protection Association:

Mutual aid: two-way assistance by fire departments, often of adjoining jurisdictions

Automatic aid: prearranged, automatic response by mutual aid fire companies, commonly used in areas adjacent to the city limits of two cities

Outside aid: protection provided on a contractual basis by a fire department to adjacent areas and nearby communities

Why must municipalities draw upon one or another of these forms of fire suppression service? The reason is that, particularly in smaller communities, it is not possible to equip and staff a fire department to effectively handle all potential fire emergencies. In a smaller community, it may not even be feasible to maintain or develop any fire suppression services at all.

People who watch large fire scenes in the major cities or on television are accustomed to seeing pumpers, aerials, tankers, specialized vehicles and large crews arrive from numerous fire stations to work cooperatively.

When a large fire breaks out in a smaller community which has only one fire station equipped with limited apparatus and personnel, firefighting assistance, if needed, must necessarily come from neighbouring municipalities.

Most municipalities in Alberta have one or more mutual aid agreements. As helpful as these are, they are not always ideal due to the inherent delay factor in the mutual aid system, since mutual aid is not called for the minute the fire alarm sounds.

The usual scenario is for the municipality's fire department to gather at the fire station, don protective clothing, proceed to the fire scene and size up the nature and extent of the fire. Only at that point, or even later, when the fire proves too much for the team to handle, is the decision made to call for mutual aid. There is a further delay until the second or third fire department is able to arrive.

Since the time factor is a critical element in firefighting, the result of this

series of delays may force the firefighters to play "catch up" with the fire, and achieve less than ideal results despite their best efforts.

To help eliminate response delays to fires on large or particularly high value properties, or to fires which present extreme exposure threats, it is not uncommon to arrange in advance for "automatic aid". This system ensures that when an alarm is received from these specific sites, an immediate call is made to the automatic aid partners. The timely arrival of additional apparatus, equipment and personnel generally lead to a more aggressive fire attack and a greater chance for success in battling the blaze.

In communities which cannot provide any fire suppression services at all, it may be advisable to turn to "outside aid", whereby the community contracts with another community to provide fire suppression services. This is a one-way arrangement which provides a service for a predetermined fee. These communities are encouraged to maintain effective fire prevention inspection and public education programs even though they may lack the usual trappings of a regular fire department.

This system differs from mutual and automatic aid in that for the latter arrangements, assistance is generally provided on a return service basis, with each municipality paying its own costs of operation. In some cases the costs are tallied at each year end and a settlement made to account for disparities in services provided.

Mutual aid is not the only key to effective fire protection. It is important to remember that each time a fire occurs, some form of safety system has failed. Most fires can be attributed to carelessness: the cooking pot left unattended, the matches or lighters left for children to play with, combustible items left too close to the heater...

Fire departments and their mutual aid partners make every effort to save as much property as possible when a fire does break out, but they also play an important role between fires by encouraging citizens to take responsibility for identifying and correcting fire hazards at work or at home.

Fire departments serve not only as our principal offence against fires, they play an active role in fire prevention, the first line of defence against fire. Firefighters across the province help inform individuals about fire safety and teach property owners how to identify and eliminate serious fire hazards. Public education regarding fire prevention, distribution of fire safety information and fire prevention inspections are essential elements of a complete fire protection service.

Though fire prevention programs can substantially reduce the number of fire incidents, they can never eliminate the need for strong fire suppression capability. Since firefighting resources are expensive and therefore limited, municipalities must make the most of what is available in their region in order to provide effective fire control. That is why mutual, automatic and outside aid are key elements in planning for and establishing appropriate levels of fire protection.

Protecting our forests

by Kathy Lazowski
Public Affairs Officer
Alberta Forestry, Lands and Wildlife

Wildfire: its destructive potential is awesome. A carelessly dropped match or a bolt of lightning can provoke flames that will wipe out stretches of valuable timber in a matter of hours. Early detection and quick response are the keys to controlling this most visible and dramatic threat to our forests.

"Alberta has one of the most sophisticated fire detection systems in Canada," says John Benson, Director of the Forest Protection Branch of the Alberta Forest Service (AFS), the division of Alberta Forestry, Lands and Wildlife responsible for managing Alberta's forests on crown land.

"Through the use of our forestry lookout towers, assistance from the public, aircraft, infrared scanners and a state-of-the-art lightning detection system, we are able to detect most fires in the early stages, while they are still less than 0.1 hectares (quarter acre) in size."

AFS has a 95 per cent success rate in initiating firefighting before the wildfire spreads across 1.2 hectares. This is due to the use of a presuppression preparedness resource system that positions personnel and equipment in areas where the fire hazard and risk are highest.

Even with its many advanced systems and proven capacity for excellent response time, AFS, like the majority of forest protection agencies, recognizes the importance of mutual aid agreements as a source of help in minimizing forest fire losses.

"We need to be prepared for the worst possible situation," says John Benson. "Wildfire is dependent on so many factors that are out of human control, such as weather and fuel moisture. The stakes are too high, the situations unpredictable and the cost of purchasing equipment too prohibitive to think we can always succeed on our own."

There are a number of groups responsible for fire suppression in Alberta. AFS looks after the provincial land within the designated forest protection area, the Canadian government handles fire prevention and suppression within national parks and municipalities, and counties fight fires within their established boundaries. When human life or private property are at risk, however, there are no boundaries.

Once a request for assistance is made, the response is immediate. Supporting agencies are then reimbursed for their costs. Over the past couple of years, AFS has provided mutual aid to a number of counties and municipalities in Alberta.

All of Alberta's borders are covered under agreements for cooperative fire action.These "border zones" are of particular interest to provincial and state governments, since wildfires can affect their forest resource.

"Whether or not the fire will directly impact us, if we have the available manpower and equipment to assist another province, territory or American state in need, we'll do it," John Benson affirms.

AFS is a partner with nine other provinces and the federal government in the Canadian Interagency Mutual Aid Resources Sharing Agreement, which outlines that in time of need, participants will mutually share forest firefighting resources and then will be reimbursed by the recipient for any costs incurred. These firefighting resources may include personnel, firefighting equipment and aircraft.

The Canadian Interagency Forest Fire Centre (CIFFC) in Winnipeg facilitates the interprovincial coordination and exchange of fire protection-related information as well as the sharing of firefighting equipment and personnel. Last year, the CIFFC coordinated assistance from Alberta to other Canadian members 5 times.

The CIFFC also coordinates the exchange of information with the United States and forest protection agencies in other countries.

In 1991, Canada and the United States drafted a reciprocal forest firefighting agreement and established operational guidelines to facilitate mutual aid in presuppression and wildland firefighting.

"I feel the best way to protect our forests," comments John Benson, "is through education, cooperation and planning. In Alberta we have fairly high fire prevention awareness and excellent cooperation between agencies as a result of years of hard work and lessons learned from situations like the big fires we experienced in the early '80s. We continue to learn and improve each year, but things are constantly changing. It's essential to be prepared for all kinds of situations."

Partners in Protection: An Alberta innovation

Even with a host of mutual aid agreements in place, problems do sometimes beset the crews battling a wildfire. For example, the mutual aid partners might have problems on-site with incompatible firefighting or communications equipment, or access to the fire site may be inadequate.

A group called the Partners in Protection has been formed to address these problems on a provincial scale and to provide coordinated education and fire prevention to Albertans, especially those who live in communities surrounded by forests or wildland. The group has produced a video and literature on the subject which is available to the public.

The Partners in Protection are:

Alberta Association of Municipal Districts and Counties

Alberta Association, Canadian Institute of Planners

Alberta Fire Chief's Association

Alberta Forestry, Lands and Wildlife - Alberta Forest Service

Alberta Labour - Deputy Fire Commissioner

Alberta Municipal Affairs - Planning Services Division

Alberta Public Safety Services

Canada Parks Service

Improvement Districts Association of Alberta

The Partners in Protection are holding a symposium from September 27-30, 1992 at the Jasper Park Lodge to address wildfire problems in the wildland/urban interface, the zone where wilderness and urban development overlap.

For information about Partners in Protection or the symposium, or to obtain prevention literature, please call Kelly O'Shea in Calgary, toll-free through your local Alberta RITE operator, at (403) 297-8800. VHS copies of the Partners in Protection and Beware and Prepare videos can be borrowed from the provincial film library. Call the library toll-free through your local RITE operator at 427-4381.

PHOTO: EDMONTON JOURNAL

So that this edition of Insight does not paint too rosy a picture of cooperation between Alberta's emergency responders, we are pleased to print the views of one reader who wishes to comment on the thorns.

The "Viewpoint" feature of Insight magazine is a soapbox to stand on and air your views. Start a debate: send your beefs (or bouquets) to the editor...

On January 22,1992, volunteer fire departments from Edmonton's neighbouring communities worked with the City's fire department and other rescuers to free a trucker from his crushed cab following an accident on the northwest boundary of Edmonton. Neil Davy writes that full-time firefighters have superior and unhelpful attitudes towards their volunteer counterparts that can only be dispelled by working together with them in accidents such as this.

Quit underestimating us!

by Neil Davy
former Fire Chief and Safety Officer
Volunteer Fire Department
Alberta Hospital, Edmonton
(currently on assignment in Africa)

Although they don't like to admit it, full-time firefighting personnel tend to believe that they have a monopoly on dedication and professionalism within the fire service. Part-timers (volunteers) disagree.

The truth is, many small fire departments have training standards and standard operating procedures which would surprise city-based full-time departments.

Smaller departments are generally better than their larger counterparts at rural firefighting, simply by virtue of the fact that they do it more often. For one thing, they are equipped to bring water to the fire quickly and efficiently, and they can sometimes respond faster to rural areas of a sprawling city than can the city department.

Many part-timers are trained emergency medical technicians who are equipped to respond to medical emergencies. Others have St. John Ambulance first aid and CPR certificates.

It is a failing within the fire service that these smaller departments, source of a wealth of emergency expertise, are under-utilized by the city departments. Moreover, part-timers would welcome the opportunity to work with their full-time colleagues.

I suggest that members of larger departments visit a smaller department, take a good look around, examine the equipment and standard operating procedures, and ask about the volunteers' level of training. I urge full-timers to get to know their part-time colleagues by inviting them to an occasional training session (most would welcome this opportunity), so that part-timers and full-timers can meet and learn from each other. It is only after working together that superior and unhelpful attitudes will be dispelled.

In Alberta, part-timers outnumber full-timers by about three to one (8,500 to 2,500). It is a disservice to the citizens of our province to under-utilize this tremendous resource.

Blowout!
Teamwork averts potential oilfield disaster

by Glen Abrey
APSS District Officer
Red Deer

December 6, 1991 started out quietly but ended in near catastrophe. Everyone in the vicinity of Haynes, Alberta escaped unscathed from a potentially dangerous sour oil well blowout, not because of a miracle but because of long-term emergency planning and teamwork.

A work-over was being performed on the Lasmo sour oil well, by Alberta Gold, a well servicing company. Staff were following normal procedures in completing a bottom hole pump changeover. While the crew was changing blowout preventers, well control was lost.

The Alberta Gold workers knew the well was capable of releasing gas containing 17 per cent H_2S. They left the area and called for help. Safety Boss and Firemaster, two experienced blowout specialist organizations from Red Deer, responded at once.

Back in Edmonton at Alberta Public Safety Services headquarters, the

Duty Manager that evening, Rudy Willhauk, and the staff of the Coordination and Information Centre were contacting municipal and provincial government departments and coordinating the behind the scenes activities. An extensive support mechanism is brought into play under the Government of Alberta's Response Plan for a Sour Gas Release.

Gulf employees on site implemented the company's own Emergency Response Plan. This plan calls for notification of the Alberta government's Energy Resources Conservation Board (ERCB). The ERCB then initiates the provincial plan.

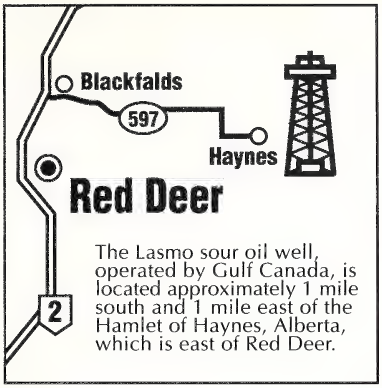
History has proven that the first hour of most disasters is marked by lack of communication and a certain amount of chaos, and this case was no exception.

Upon reaching the site, the RCMP, Lacombe Fire Department and oil company employees first evacuated surrounding residences (as a precautionary measure), and subsequently the majority of residences in a 4-mile radius, even though no accurate H_2S reading had yet been obtained to justify this course of action.

The Gulf Emergency Response Plan called for a reception centre to be set up at the Community Centre in Blackfalds. This was accomplished through the Director of Disaster Services for the County of Lacombe, Keith Brewer.

The ERCB notified APSS of the blowout. Meanwhile, the ERCB set up a Main Control Headquarters (MCHQ) at the Red Deer ERCB office. I was called to the MCHQ along with an RCMP officer.

The MCHQ turned quicky into a beehive of activity. Several ERCB representatives were on hand, as well as Staff Sergeant Doug Bottoms from the RCMP, members of Occupational Health and Safety, the Red Deer Health Unit, Alberta Environment, the provincial government's Public Affairs Bureau and Alberta Agriculture. Jeff Strem of the ERCB, acting for Ed May, the ERCB's area supervisor, had operations under control while Ed May was being paged from Calgary. ERCB sour gas expert Steve Rosso was also present.



The Lasmo sour oil well, operated by Gulf Canada, is located approximately 1 mile south and 1 mile east of the Hamlet of Haynes, Alberta, which is east of Red Deer.

At 8:00 p.m., some three hours after the start of the blowout, Jeff Strem declared this to be a "Category Two" release (a Category Two sour gas release is one which may pose a threat to public health or safety).

Including staff from the oil companies and the ERCB, there were over 20 people that night in the MCHQ, and not enough phones to go around. Alberta Government Telephones could only arrive several hours later from Calgary due to heavy fog. Lines of communication were established between the MCHQ, the reception centre and the County of Lacombe's Director of Disaster Services, Keith Brewer.

Keith Brewer remained at the Lacombe Police Station with a copy of his Emergency Response Plan and sent his Deputy Director to the site. Brewer kept school buses and Public Works staff members on stand-by. Several road block stands were later requested on site, but were difficult to see in the heavy fog.

When H_2S readings in the whole area were taken, they were determined to be less than 7 parts per million, which is not high enough to cause health problems. The evacuation was halted. Over 160 people had already registered in Blackfalds.

The well was finally shut down by Safety Boss just before noon the following day. The few remaining evacuees were allowed to return home.

A debriefing was held at Blackfalds on January 8, 1992. It was agreed that the evacuation had been done for safety's sake. Most of those evacuated had no complaints and were adequately compensated by Lasmo Oil Company.

No mock disaster exercise can compare to a real incident. Amid the chaos of the event, important lessons were learned and emergency response plans will be amended as a consequence. For example, in the future, all oil service companies on site will have a copy of the Emergency Response Plan particular to the well being worked on.

In the final analysis, however, there were no injuries and minimal environmental damage. This incident put Alberta's sour gas plan to the test and the results show once again that pre-planning, training and the staging of disaster exercises are invaluable in minimizing the effects of an accident such as this.

Tragedy on the tracks: an eyewitness account of the Kinsella crash

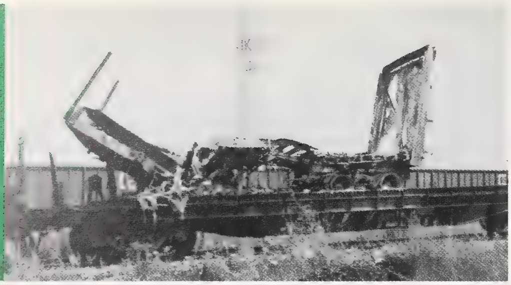
by George H. Roddick
Fire Chief
Town of Viking, Alberta

The tanker-train accident at Kinsella on August 6, 1992, resulted in the largest mutual aid effort in the history of the County of Beaver, Alberta.

The crash

At 3:28 p.m., a westbound CN freight train composed of 3 locomotives and 31 cars, travelling at 100 km per hour, struck a southbound Gibson Petroleum Company Ltd. super-B tractor-trailer loaded with crude oil. The tanker exploded on impact into a massive fireball and showered the three locomotives with burning crude oil.

As the train continued down the track for an additional 3 km., burning oil ran off, starting grass and brush fires on both sides of the track. Diesel fuel spewed from the ruptured fuel tanks on the two lead locomotives. Once the train had stopped, fire began spreading from the rail bed up to the flat cars, most



COURTESY OF THE WEEKLY REVIEW, VIKING, ALBERTA

The remains of the train.

of which were loaded with piggyback truck trailers.

The driver of the tractor-trailer and the three-man train crew perished upon impact in the intense heat and fire.

Immediate response from Kinsella

Kinsella Fire Chief Carter Oakes dispatched the Kinsella fire truck to the scene of the crash, his immediate objective to extinguish the burning truck. He then quickly got on the telephone and called in mutual aid from the towns of Viking, Irma, Lougheed, Wainwright, Holden, Bruce, and subsequently, Canadian Forces Base Wainwright.

Combined equipment

Once assembled, the combined force included eight pumpers, two mini-pumpers, two foam units and the Viking Rescue Unit, which served as a mobile command post. In addition, a six-man crew from the Tofield Fire Department was dispatched to the scene. There were five water tankers on hand and a water bomber sent by Alberta Forestry, Lands and Wildlife, which flew over the scene five times to drop fire retardant chemicals on the blaze below.

Initial setback

Before they were able to extinguish the burning tanker truck, the Kinsella fire crew ran out of water. The Viking Fire Department arrived and attempted to extinguish the fire in the lead locomotive with AFFF foam, but the intense heat and limited water supply hampered their efforts. The next team to arrive, from Irma, took over where the other teams had left off, and extinguished the remains of the tanker.

Dangerous goods; dangerous conditions

Due to the extreme dryness of the area, the fire was spreading quickly in all directions and still burning fiercely on several train cars. Many of them were placarded for dangerous goods in general categories, meaning that information was essential to deal with the problem. Yet the train had no caboose, so that all paperwork had been stored in the lead locomotive, which was inaccessible.

Mutual decisions

Viking Deputy Fire Chiefs, Brian Anderson and Rick Marko and Irma Fire Chief, Clair Prior decided to control the spreading bush fires first in order to obtain better access to the train. Once manifest information was available, they planned to concentrate on the train. Each additional fire department that arrived was assigned alternately to each side of the track.

Communication proved to be a problem due to different radio frequencies from each municipality. This was partially overcome by assigning hand held radios on the Viking frequency to other departments. It was also an asset that Irma and Wainwright shared the same frequency. Although Kinsella, Viking, Bruce and Holden shared a County of Beaver frequency, it was difficult to use due to the hilly terrain and the distance from the repeater in Viking. During the brush fire phase of the operation, the Viking Rescue Unit became a mobile command post.

That evening

A permanent command post was set up on the overpass on Highway 14 overlooking the CN main line. This location was chosen as it was about the mid-point of the scene and also because the higher elevation improved radio communication. The post was manned by County of Beaver Fire Chief Mel Wilson, RCMP, CN officials, local government officials and a host of others representing various government departments.

By 8:30 P.M. the CN mobile command post had arrived, along with Viking Fire Chief George Roddick, who after being briefed by his deputies, took over fireground command.

Nighttime

At approximately 9:30 p.m., the ground fires had been put out and mutual aid resources began to be released from duty. The flat cars were still burning and because of the extreme difficulty in mounting an attack due to the rough terrain, it was decided to bring in a locomotive from Viking and pull the remainder of the train approximately one kilometre west to the next level crossing, where an attack from both sides could be mounted.

Fire officials were concerned with the possibility of derailment, as the rails were badly warped from the heat. Since there wasn't any alternative, the train was slowly moved to the crossing. The Irma unit was positioned on the north side of the tracks and the Wainwright pumper along with the Canadian Forces foam unit on the south side.

As the locomotive moved the charred train ahead, the crews worked from car to car to extinguish the fires. It was necessary to pull much of the debris off the flat cars with pike poles and shovels as the fires had started from below and the entire car was hot.

At 11:00 p.m., the Wainwright Fire truck was replaced by a Viking unit which was supplied by two water tank trucks.

Into the wee hours

By 3:00 A.M., the crews had begun to cool the lead locomotive and prepared to search for the bodies. Care was taken to avoid putting water directly into the cab so as not to destroy evidence.

The bodies were discovered in a compartment below the cab on the floor of the lead locomotive. The floor of the cab had been entirely burned out. The RCMP spent the next hour and a half removing the remains.

6:00 A.M.

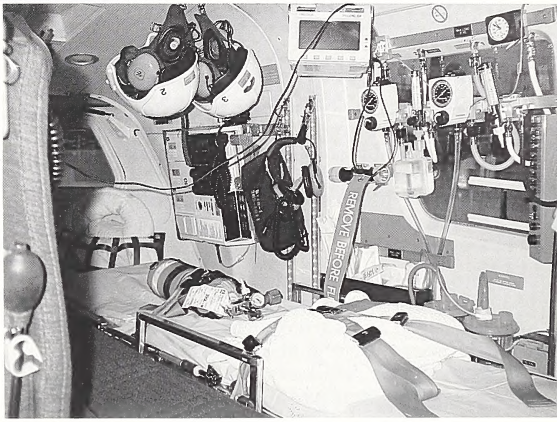
When all the fires were extinguished, the train was pulled slowly to Viking. CN spent the remainder of the day releasing seized traction motors before pulling the entire unit into Edmonton.

Conclusion

Those who participated in the aftermath of the Kinsella crash agree that the entire operation went as smoothly as possible. In the face of extreme conditions and haunting human tragedy, the cooperation and effort of all responding units was, as CN spokesman Scott Roberts put it, "outstanding, absolutely outstanding!"

An airlift in progress.

DAN RIEDLHUBER, THE EDMONTON SUN



STARS' MBB BK-117 helicopter, like all STARS aircraft, has a dedicated medical interior.

Mutual aid takes flight

by Mark O'Flanagan
Outreach Coordinator
STARS Aeromedical Transport Service

Aeromedical transport was invented on a battlefield in 1870, when it was discovered that the most efficient and speedy way to transport injured soldiers to and from Paris was via hot air balloon.

The first use of helicopter transport as a means of patient evacuation again took place in time of war, this time in Korea and Vietnam.

Critical evaluation and subsequent studies have clearly identified a decreased mortality rate for trauma victims transported via rapid aeromedical transport from the scene of an accident.[1]

Dedicated medical helicopters have proven useful not only in evacuating traumatized patients from an accident scene, but in getting medical personnel quickly to the accident site as well as in transfering critically ill patients from rural hospitals to specialized urban ones.

In 1985, a group of Calgary physicians who recognized the need for rapid transport of seriously ill Albertans founded the Alberta Shock Trauma Air Rescue Society (STARS). By August 1991, 1,388 patients in southern Alberta had flown to medical care in a STARS craft.

Under the terms of its contracts with Alberta Health, STARS operates rotary and fixed wing aircraft out of its two bases, one in Edmonton and the other in Calgary. All four STARS aircraft are equipped with dedicated medical interiors.

The Calgary base operates on a 24-hour a day basis. Pilots and air medical crews are on site at all times.

The STARS operation in Edmonton, which started up in September, 1991, is staffed during the day by an on-site pilot, paramedic and nurse. During evening hours, crews are on thirty-minute call back for fixed wing coverage. STARS North plans to upgrade to 24-hour a day helicopter response this year.

In both centres, lift-off occurs approximately 8 minutes after notification of an accident.

The STARS program is not meant to replace front-line emergency services, but to enhance existing community based services. Inter-agency cooperation and "end-user" input are essential factors in the STARS philosophy, and to demonstrate how STARS is meant to fit into the existing emergency response system, the organization has developed an outreach program to introduce the staff of community-based emergency services and health care facilities to the STARS service. These training sessions help community emergency personnel learn about the safe and appropriate utilization of aeromedical transport.

A multi-media presentation is provided to teach emergency responders how to call for helicopter patient evacuation, establish emergency landing zones, handle and prepare patients for the flight, and ensure personal safety around rotary aircraft.

Information on these outreach sessions and about the STARS service in general can be obtained by calling Mark O'Flanagan in Edmonton at 447-5492, or Patti Long in Calgary at 295-1811.

(Editor's note: please see the article on page 10 for information on related training at Alberta Public Safety Services.)

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[1] Baxst et al., Hospital Based Rotorcraft Aeromedical Emergency Care Services and Trauma Mortality: A Multicenter Study, 1984.

Product Profile: Phosphoric Acid

Ever wondered what gives cola drinks that sharp, tangy taste? Go ahead, take a guess.

No, it's not sugar. It's phosphoric acid! This product is one of the most widely used industrial chemicals in North America, the seventh highest volume chemical produced. Very weak solutions (less than 5 per cent) have a pleasant acid taste, hence their use in carbonated beverages.

Phosphoric acid is also found in many other well known household, industrial and agricultural products like soaps, detergents, inorganic phosphates, fertilizers and, in small quantities, food products. In addition, it is used in pickling, rustproofing of metals, water treatment, dental cements and animal feeds.

Phosphoric acid is a primary ingredient in the manufacture of phosphate fertilizers and phosphate products. As early as 1840, a German scientist named Liebig recommended the reaction of bones (a source of calcium and phosphate) with sulphuric acid to produce a better fertilizer. In 1842, English scientists improved upon this idea and came up with a process to produce "superphosphate" fertilizer. By 1870, the phosphate fertilizer industry was born. Today, the most common type of phosphate fertilizer is an ammonium phosphate product.

Phosphoric acid is usually manufactured via the "wet process", in which another liquid (sulphuric acid) is used to produce the acid. Generally, the process starts with crude phosphate rock mineral which is crushed and then reacted with sulphuric acid. The result is phosphoric acid and gypsum (a byproduct). Modern phosphoric acid plants are very large and can produce up to 900 tonnes per day (1000 tons per day).

A clear, colourless, heavy liquid, phosphoric acid is commercially available in many different grades, ranging in strength from 50 to 85 per cent concentration. On an equal volume basis, one gallon of 85 per cent grade acid weighs about 7.7 kg (17 lbs), whereas a gallon of water weighs only about 4.5 kg (10 lbs). The more concentrated solutions are quite syrupy and can even crystallize at temperatures of -10 C. Phosphoric acid is also available in solid form as pure 100 per cent strength crystals.

Phosphoric acid (chemical formula H_3PO_4) is a strong acid; as such it can react vigorously with other materials, especially alkaline ones, like ammonia or caustic soda. Phosphoric acid is corrosive to ferrous (iron) metals but can be safely stored in glass, plastic or stainless steel containers. Solid phosphoric acid must be stored in airtight containers to keep it dry.

Phosphoric acid will cause severe burns if left on the skin for several minutes. Immediately washing the affected area with lots of water will prevent a burn. This is why in some literature phosphoric acid is described only as an irritant.

While signs of skin exposure are redness, pain and burns, effects on eyes are more serious, and include redness, pain and blurred vision. If phosphoric acid splashes on someone, wash the affected area immediately with plenty of water, and seek medical advice.

Be aware that the pain or burn may not be felt immediately; always remove any clothing that has come in contact with the product, to prevent a reaction from occurring later on. Anyone who swallows phosphoric acid should be given large amounts of water and taken to a hospital without delay.

Under normal circumstances (room temperature), there is little or no vapor given off by phosphoric acid, so the chance of breathing in fumes are low. If heated, it will evolve pungent, irritating fumes. Phosphoric acid has an occupational exposure limit (OEL) of 1 milligram per cubic meter of air. This is the maximum allowable concentration in workplace air for an 8-hour shift. Signs of overexposure are coughing, sore throat and shortness of breath.

Phosphoric acid is not combustible and will not support or aid a fire. If a transportation accident involves a fire by some other means and phosphoric acid is also involved, consider the following: when heated, phosphoric acid will start to give off pungent, irritating vapors; if heated to 300 C, it will start to decompose and release toxic vapours of various phosphorus oxides. In addition, contact with most metals (except stainless steel) will cause a reaction and subsequent release of flammable hydrogen gas. Self-contained breathing apparatus must be worn in these situations.

Small spills can be neutralized and solidified by absorbing the acid with equal portions of sand, soda ash and clay. Prior dilution with lots of water may make the neutralization step easier, less reactive and is often the safest way to deal with most spills. Larger spills are best diluted with larger quantities of water, collected and then neutralized. When diluting with water, always use more than the amount of the spill - adding small amounts of water can be dangerous. Full safety apparel, including rubber gloves, boots, apron and safety glasses should be worn when handling the product or responding to a spill.

The Transportation of Dangerous Goods Regulations lists phosphoric acid as a Class 8 corrosive with a subsidiary classification of 9.2 (environmentally hazardous), a product identification number of UN 1805 and packing group III. There are two listings in the Regulations for phosphoric acid based on its physical state, liquid or solid.

SAFETY COURSES

ALBERTA PUBLIC SAFETY SERVICES TRAINING SCHOOL
Central Courses Schedule 1992-1993

April 6-10
9201
Rescue Leaders

April 14-15
9202
On-Highway Inspectors
Edmonton City Police

April 14-16
9203
Emergency Planning for Indian Bands

May 4-7
9204
Emergency Site Management

May 4-7
9205
Emergency Public Information Officers

May 19-20
9206
NAIT Paramedic Rescue Workshop

May 26-28
9207
Disaster Social Services

June 9-11
9208
Emergency Planning for Municipalities (formerly known as Program Management)

June 9-10
9209
Dangerous Goods Carriers & Shippers (provincial employees only)

September 15-17
9210
Disaster Social Services

September 28 - October 1
9211
Emergency Site Management

September 28 - October 1
9212
Emergency Public Information Officers

October 5-6
9213
On-Highways Inspector
Motor Transport Service

October 20-22
9214
Disaster Health Planning Seminar

October 26-30
9215
Rescue Leaders

November 17-19
9216
Emergency Planning for Municipalities (formerly known as Program Management)

November 24-26
9217
Emergency First Responder

December 1-2
9218
Dangerous Goods Carriers & Shippers

December 8-10
9219
Emergency Planning for Indian Bands

January 25-28
9220
Emergency Site Management

January 25-28
9221
Emergency Public Information Officers

February 9-11
9222
Disaster Health Planning Seminar

March 16-18
9223
Disaster Social Service

As part of our "Emerging Issues in Emergency Preparedness" series of workshops, the Training School provides opportunities for future-looking discussion of topical issues. Look for a schedule in the next issue of *Insight*.

During the next year, we hope to pilot some new courses now in development. The scheduling of these new courses will be included in future editions of *Insight*.

NAIT COURSES

Transportation of Dangerous Goods

To register for one of the following courses, visit the Registrar's office at 11762 106 Street, Edmonton, or call 471-7427 and quote the course number.

Transportation of Dangerous Goods - Instructor Certification
Fee: $495 + GST
April 13-17 (Course TEC551D); June 22-26 (Course TEC551E)

Transportation of Dangerous Goods at the Worksite
Course TEC555B.
Fee: $125 + GST
March 23

Trainer Skills Workshop
Course TEC556B.
Fee: $225 + GST
May 4-5

Workplace Hazardous Materials (WHMIS)

WHMIS: Trainer Course
Course TEC552D. Fee: $285 + GST
April 26-28

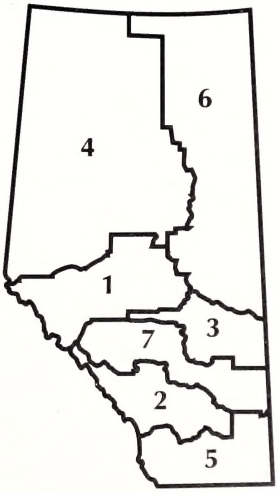
Trainer Skills Workshop
Course TEC556B.
Fee: $225 + GST
May 4-5

WHMIS: Introduction and/or Site Specific
(A customized training package for companies. Call Harold Hayter at 471-7584 for further information).

Information about APSS courses can be obtained directly from the Training School, telephone 422-0346 in Edmonton.

To register for a course at the APSS Training School, call the APSS District Officer nearest you:

1. Edmonton
422-1909
2. Calgary
297-6440
3. Camrose
679-1269
4. Grande Prairie
538-5295
5. Lethbridge
381-5222
6. St. Paul
645-2533
7. Red Deer
340-5102



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Huge display of safety resources set for Fort Saskatchewan

The largest emergency response and safety exposition ever held in Fort Saskatchewan, one of Edmonton's neighbouring communities, will take place from June 3 to 6, 1992.

The City of Fort Saskatchewan and the Community Awareness Emergency Response (CAER) committee of the Fort Saskatchewan Regional Industrial Association are jointly hosting the 4-day exposition. On display will be exhibits and demonstrations of the latest emergency response, health and safety and environment protection techniques and equipment.

The exposition will take up two arenas and the adjacent grounds. Organized tours will be provided for school students, and buses will provide regularly scheduled tours through Dow's "Wildlife Greenbelt".

This is a unique opportunity for residents of Fort Saskatchewan and surrounding areas to view the magnitude of resources available to make Fort Saskatchewan a safe community.

The exposition has been in the planning stages for over a year. Its working committee is co-chaired by Dave Worman, Director of Disaster Services for the City of Fort Saskatchewan and Fire Chief Ray Sankey, with help from Alberta Public Safety Services, Alberta Occupational Health and Safety, the City of Fort Saskatchewan, the Fort Saskatchewan Regional Industrial Association, CN Rail, The Chamber of Commerce, local safety associations and other interest groups.

Notice: Quality of backboards

It has come to the attention of Alberta Public Safety Services that the quality of commercially available backboards is variable and this could pose some safety problems.

Accordingly, the APSS suggested practice for lowering casualties is to use a backboard placed in a stokes stretcher. The variability in quality of commercially available backboards makes board breakage a potential hazard if the board alone is used for lowering.